

**WHAT IS CLAIMED IS:**

1. A spectral ellipsometer having a refractive illuminating optical system (3) for an illuminating ray bundle (2), coming from an illumination unit (1), for  
5 generating a measurement spot (6) on a surface (4) of a specimen (5); and having a detector unit (8) that receives and detects, as a measured ray bundle (7), the light reflected from the surface (4) at the location of the measurement spot (6), wherein the illuminating optical system (3) is color-corrected.  
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2. The spectral ellipsometer as defined in Claim 1, wherein the color-corrected illuminating optical system (3) is a lens doublet or a lens triplet.
3. The spectral ellipsometer as defined in Claim 1, wherein the color-corrected  
15 illuminating optical system (3) is made of glass having high transmission in the UV range and/or has an anti-reflection coating.
4. The spectral ellipsometer as defined in Claim 1, wherein the color-corrected  
20 illuminating optical system (3) is constructed from individual refractive optical elements that are joined with a cement having high transmission in the UV range.
5. The spectral ellipsometer as defined in Claim 1, wherein a receiving optical  
25 system (9a) that is color-corrected is provided for the measured ray bundle (7).
6. The spectral ellipsometer as defined in Claim 5, wherein the color-corrected receiving optical system (9a) is a lens doublet or a lens triplet.

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